

## **Remarks**

### **Allowed and Object d-to Claims**

As noted in Advisory Action, claims 6 and 7 are allowed, and claims 12 and 14 – 18 are objected to. Basis for objection was set forth in Office Action mailed November 20, 2002 was that the claims were dependent on a rejected base claim, but would be allowable if rewritten in independent form.

Claims 12, 14 and 17 have now been made independent as suggested in the office action, with claims 15 and 16 depending on claim 14. As such, claims 12 and 14 – 18 should now be in allowable form, and Applicants request a notice to that effect.

### **Other Claims**

The remaining claims fall into three groups. Claims in Group I (claims 9 and 11, as amended) require that the E/X/Y acid copolymer (a) be a terpolymer (Y must be present) in an amount up to 50 wt. %). Claims in Group II (claims 1, 4, 5, 8, 10, 13, 19 and 20, as amended) allow the acid copolymer to be a bipolymer (Y may be 0 wt. %), but require at least 95% neutralization of the acid in both the acid copolymer (a) and the high molecular weight, monomeric organic acid (b). Group III (claims 21 – 25, as amended) are process claims for making the composition of Claim 1, requiring at least 95% neutralization. Applicants respectfully request that the claims in these three Groups be reconsidered in view of the following remarks.

### **Group I (Claims 9 and 11)**

The claims in this group require that the E/X/Y acid copolymer (a) be a terpolymer (Y must be present) in an amount up to 50 wt. %). Reconsideration of the claims in this Group is requested.

As noted by the examiner in the office action mailed 11/20/2002, GB '342 is directed solely to ethylene/acid copolymers, thus lacking the alkyl acrylate or alkyl methacrylate required in Group I. As such, Claims 9 and 11 should be allowable on the same basis as, for example, claim 6, and Applicants respectfully request a notice to that effect.

**Group II (Claims 1, 4, 5, 8, 10, 13, 19 and 20)**

The claims in this group allow the acid copolymer to be a bipolymer (Y may be 0 wt.%), but require at least 95% neutralization of the acid in both the acid copolymer (a) and the high molecular weight, monomeric organic acid (b). Reconsideration of the rejection of the claims in this Group under 35 U.S.C. §103(a) as being unpatentable over GB 2164342 in view of Chen '321 or WO 98/46671 is requested.

GB '342 teaches a blend of a resilient thermoplastic material (e.g., polyester block copolyamide, copolyester, ionic elastomer, poly (1,2-polybutadiene, or styrene/ethylene/butylene/styrene block copolymer) with (1) a potentially-ionizable ethylene  $\alpha,\beta$ -unsaturated carboxylic acid copolymer ionized subsequent to formation of blend; (2) an ionic copolymer of ethylene and  $\alpha,\beta$ -unsaturated carboxylic acid which is further ionized subsequent to formation of the blend; or (3) an ionic copolymer of ethylene and  $\alpha,\beta$ -unsaturated carboxylic acid which is substantially ionized and which is powdered (max 200 micron) prior to formation of the blend. Neutralization is at least 60%.

The only resilient thermoplastic material exemplified in GB '342 is a polyester block copolyamide (PEBAX 3533). Polyetheresters having a shore D hardness of about 30 – 40 are not.

GB '342 does not suggest inclusion of monomeric organic acids or salts. GB '342 suggests neutralizing all the acid of the ethylene/acrylic acid to at least 60%. Since it doesn't even suggest adding an organic acid, it cannot possibly suggest neutralization of the acid in both the ethylene/acrylic acid and monomeric organic acid.

Chen '321 or WO 98/46671 (collectively Chen References) are used as a basis for modifying GB 2164342 to include monomeric organic acids. Applicants question the basis for combining these references. But even if combined maintain that the references taken as a whole do not teach or suggest the invention taken as a whole.

Chen References do not teach or suggest that stearates can even be added to highly neutralized (greater than 90%) ionomers. Chen '321 teaches that level of neutralization of ionomers can be 10 – 90%. When using stearic acid, Chen '321 teaches still lower neutralization, stating "it is possible

to prepare the materials of the invention by adding stearic acid, rather than a stearate, since in effect, polymer with metal stearates, with somewhat lower level of neutralization of the ionomer will result.” (see col. 4, ll. 17 – 19 and col. 6, ll. 41 – 46).

If one were motivated to combine Chen References with GB ‘342, patent law requires that the references be taken as a whole. As such, Applicants maintain that one skilled in the art, without the benefit of 20/20 hindsight, would be led to the 90%-or-less degree of neutralization apparently required for stearate to work according to Chen References. GB ‘342 requires at least 60% neutralization. Thus, so that all of the references would not be expected to fail of their purpose, one skilled in the art would be led to a neutralization range with a lower limit of 60% (so GB ‘342 doesn’t fail) and a higher limit of 90% (so that Chen References don’t fail).

**Group III (Claims 21 and 25)**

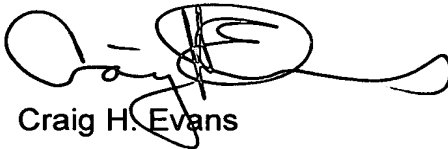
With the amendment of claims 21 – 25, the degree of neutralization is now consistent, reflecting at least 95% neutralization. Applicants note the comment that the claims do not require an order of mixing. Applicants respectfully traverse this point. Note that the important “order” included in the claims pertains to first melt-blending the ethylene acid copolymer and organic acid, and “subsequently” neutralizing to at least 95% with the cation. The invention does not include, for example, neutralizing at least 95% of the acid in the ethylene acid copolymer and then adding the organic acid or organic acid salt.

In view of the above including the comments made with respect to Groups I and II and comments made in earlier responses, Applicants request reconsideration and allowance of claims in Group III.

**Conclusion**

In view of the above remarks and amendments, Applicants feel that claims 1 and 4 – 25 are now in condition for allowance and such action is requested. Should the Examiner believe that an interview or other action in Applicants' behalf would expedite prosecution of the application, the Examiner is urged to contact Applicants' attorney by telephone at (302) 992-3219.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Craig H. Evans', with a large, stylized initial 'E'.

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